V. V. PATTON.

ELECTRICAL SAFETY LAMP FOR MINERS.

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1,026,924.

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Fig. 1.

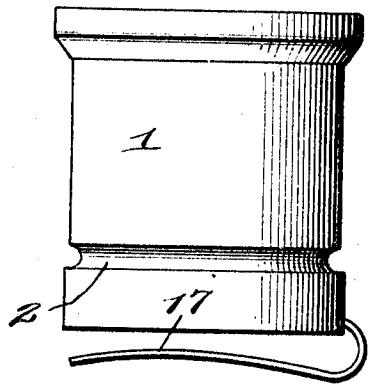


Fig. 2.

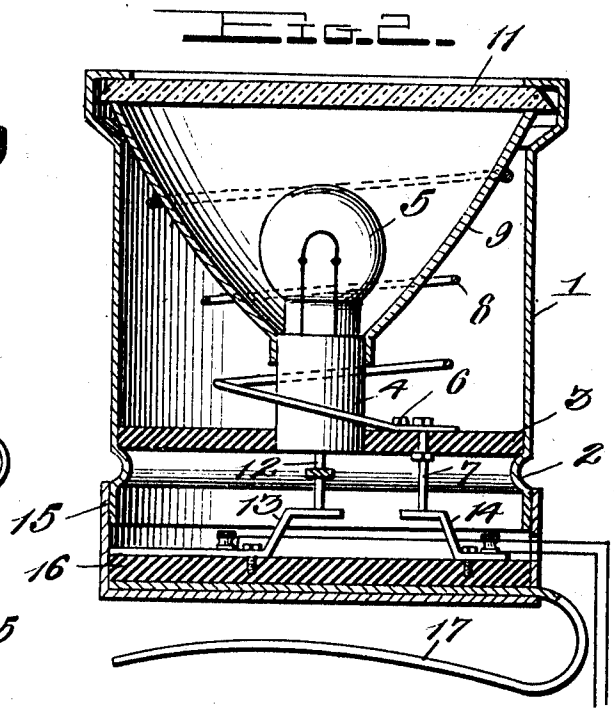
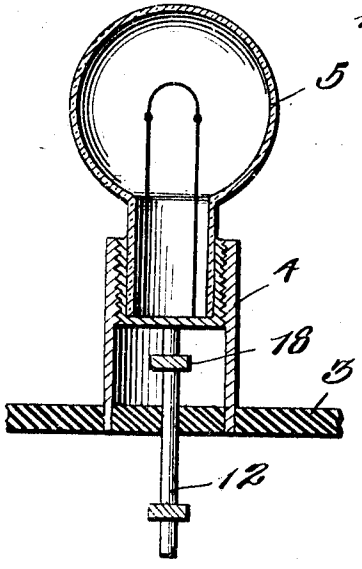


Fig. 3.



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ELECTRICAL SAFETY-LAMP FOR MINERS.

1,026,924. Specification of Letters Patent. Patented May 21, 1912.

Application filed November 29, 1910. Serial No. 594,760.

To all whom it may concern:

Be it known that I, VICTOR V. PATTON, a citizen of the United States, residing at Tollarburg, in the county of Las Animas and State of Colorado, have invented certain new and useful Improvements in Electrical Safety-Lamps for Miners, of which the following is a specification, reference being made therein to the drawings.

This invention relates to miners' lamps and more particularly to a self-protecting electric safety lamp, and has for its object to provide means for automatically extinguishing the lamp in case the lamp be damaged, particularly in the manner to be referred to in a later part of the specification.

Other objects of this invention will become apparent as it is more fully set forth.

In the accompanying drawings which illustrate by way of example an embodiment of this invention, Figure 1 represents a view in elevation of a lamp embodying this invention. Fig. 2 is a central sectional view of Fig. 1. Fig. 3 is a detail of the lamp.

Similar reference characters refer to similar parts throughout the drawings.

In the construction shown in the drawings, 1 represents a casing of a lamp which is provided with a bent-in portion 2 at the lower portion thereof for the purpose of forming a support on the interior portion of the casing, for an insulating base, 3. The base 3 fits the casing closely and is arranged to come adjacent to a socket 4 that is provided for holding an incandescent electric lamp 5. A connection is made to the casing of the socket by means of a suitable conductor 6 that is provided with a suitable contact-pin 7 thereon. Mounted on the member 3 and secured to the conductor 6 is a coil spring 8 that engages with a metal reflector 9 that is securely fastened to the upper portion of the socket 4. The reflector 9 is preferably of a cone like shape as is shown in the drawings and arranged to engage with the beveled sides of a cover glass 11, which closes the upper portion of the casing.

The cover glass 11 is held within the casing in any suitable manner but preferably by bending the same at its end portion as is indicated in the drawings, it being only necessary in constructing this portion of the casing to make it conform with the conditions and so that the metallic reflector 9 will be insulated from the casing 1 by means of the cover glass 11. Movably disposed within the socket 4 is a contact-pin 12 that extends through the insulating member 3 to a contact spring 13 provided for the purpose of holding it in proper tension, so as to keep the same against the central and lower portion of an ordinary Edison base incandescent lamp. Another suitable spring contact 14 is provided for engagement with the contact-pin 7. The lower portion of the casing 1 is suitably provided with locking means, such as a bayonet joint to engage with the section 15 of the casing which forms the back portion thereof and which has an insulating member 16 therein provided for the proper support of the contact springs 13 and 14. Suitable binding posts connected to the springs 13 and 14 are for the purpose of connecting the feeding wire thereto, and a suitable hook or clasp 17 is provided for the purpose of securing the lamp to the miner's cap, or in any other convenient location. The contact 12 is provided with projections 18 thereon for the purpose of keeping it suitably within the insulating member 3.

Should the cover glass be broken by any means, or should the casing be crushed downwardly, the reflector 9 will be forced into contact with the casing 1 and thereby shunt the lamp, thereby causing the latter to go out and prevent it from exploding the gas in the vicinity of the lamp, should the damage cause the glass of the bulb to be broken. The connection that grounds the casing comes from the spring contact 13 as is clearly shown in the drawings.

The general operation of the other parts of this device is clearly apparent from the drawings, or too well known to need further description, so that the same has not been enlarged upon, in the specification.

Obviously while there is shown but one form of this invention in the drawings, it is not desired to limit this application for patent to that particular form, or in any other way otherwise than necessitated by the prior art, as many modifications in the construction of this invention may be made without departing from the principles thereof, or coming within the scope of the appended claims.

Having thus described this invention, what is claimed is:—

1. In a lamp of the class described, the combination of a collapsible casing, a cover glass disposed in said casing, a metallic re-

flector disposed on said cover glass and having an end portion arranged to engage with the cover glass so that the latter will normally insulate said reflector from the casing.

2. In a lamp of the class described, the combination of a collapsible casing, a cover glass disposed in said casing, a metallic reflector disposed on said cover glass and having an end portion arranged to engage with the cover glass so that the latter will normally insulate said reflector from the casing, and means for resiliently forcing said reflector against said cover glass so that the removal of the latter will permit contact to be made between the casing and the reflector.

3. In a lamp of the class described, the combination of a collapsible casing, a cover glass disposed in said casing, a metallic reflector engaging with said cover glass so that the latter will normally insulate said reflector from the casing, means for resiliently forcing said reflector against said cover glass so that the removal of the latter will permit contact to be made between the casing and the reflector, and electrical connections for said resilient means and the casing arranged so that the lamp circuit will be shunted by the casing and reflector, when the latter is compressed.

4. In a device of the class described, the combination of a collapsible casing having one end portion inwardly bent, a cover glass disposed on said bent portion, a metallic reflector disposed on said cover glass and arranged to keep the same against the casing and adapted to make contact with said casing when the same is compressed or the cover glass removed, resilient means disposed in said casing and arranged to keep said reflector in position and to form electrical contacting means therefor, a lamp socket arranged to support said reflector and electrically connected therewith, and means for electrically connecting said casing, resilient means and reflector to a lamp circuit.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."